

WHAT IS CLAIMED IS:

1. A medical probe for detecting flow of fluid within a bodily passage, the probe having a distal end and comprising:
- 5 a transducer head that includes an ultrasonic transducers adjacent the distal end of the probe, the ultrasonic transducers adapted for generating signals in response to fluid flow;
- 10 an electrical conductor operatively connected to the ultrasonic transducer and connectable to an external source unit for processing flow-responsive signals; and
- a shapeable portion extending proximally from adjacent the distal end.
2. The medical probe of claim 1, wherein the shapeable portion comprises
- 15 a metal cannula adapted to be plastically deformed.
3. The medical probe of claim 1, wherein the transducer head is moveable relative to the distal end of the shapeable portion.
- 20 4. The medical probe of claim 3, wherein the transducer head is adapted to at least partially reside within the shapeable portion and is at least partially extendable from the distal end thereof.
5. The medical probe of claim 1, wherein the transducer head includes an
- 25 encasing material surrounding the ultrasonic transducer.
6. The medical probe of claim 5, wherein the encasing material includes an epoxy material.
- 30 7. The medical probe of claim 1 further including a longitudinal axis, wherein

the ultrasonic transducer includes a first operative surface, the first operative surface of the ultrasonic transducer being oriented approximately perpendicular with respect to the longitudinal axis of the medical probe.

- 5 8. The medical probe of claim 1 further including a longitudinal axis, wherein the ultrasonic transducer includes a first operative surface, the first operative surface of the ultrasonic transducer being oriented approximately parallel with respect to the longitudinal axis of the medical probe.

- 10 9. The medical probe of claim 1, wherein the electrical conductor comprises a first and a second wire attached to the ultrasonic transducer.

- 15 10. The medical probe of claim 9, wherein the first and second wires include shapeable wire such that the first and second wires are adapted to comprise the shapeable the portion of the medical probe.

11. The medical probe of claim 1, wherein the shapeable portion comprises a malleable core wire, wherein the electrical conductor is located thereabout.

- 20 12. The medical probe of claim 11, wherein the electrical conductor comprises a first and a second wire helical wrapped about the malleable core wire, the medical probe further including an outer sheath disposed over the shapeable portion.

- 25 13. The medical probe of claim 1, wherein the transducer head includes a plurality of ultrasonic transducers.

- 30 14. The medical probe of claim 13 comprising a first and a second ultrasonic transducer oriented approximately 90° with respect to one another.

15. The medical probe of claim 14 further including a longitudinal axis, wherein the first and second ultrasonic transducers are oriented approximately 45° with respect to the longitudinal axis.

5 16. A medical probe for detecting flow of fluid within a bodily passage, the probe having a longitudinal axis and comprising:

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a transducer head that includes an ultrasonic transducer having a first operative surface;

10 an electrical conductor, comprising two wires, each having a first end and a second end, the first ends being operatively connected to the ultrasonic transducer, and the second ends being connectable to an external source unit adapted to generate and process Doppler signals;

a handle portion;

15 an outer sheath connected to the handle portion and at least partially houses the electrical conductor, the distal portion of the outer sheath, which extends distally from the handle portion, at least partially comprising a shapeable portion with the shapeable portion having a distal end; the transducer head being affixed about the distal end of the shapeable portion.

20 17. The medical probe of claim 16, wherein the shapeable portion includes a length of annealed stainless steel tubing.

25 18. The medical probe of claim 16, wherein the ultrasonic transducer further includes a second operative surface.

30 19. The medical probe of claim 16, wherein the handle portion is slidable relative to the shapeable portion, such that the length of the shapeable portion can be adjusted by an operator of the medical probe.

20. The medical probe of claim 19 wherein the handle portion includes a tightening mechanism to secure the handle to the outer sheath.

21. A medical probe for detecting flow of fluid within a bodily passage, the probe having a longitudinal axis and comprising:

a transducer head that includes at least one ultrasonic transducer having a first operative surface that is perpendicular to the longitudinal axis of the probe, the transducer head including an epoxy encasing material therearound;

an electrical conductor, comprising two wires, each having a first end and a second end, the first ends being soldered to the ultrasonic transducer, and the second ends being connectable to an external source unit adapted to generate and process Doppler signals;

a handle portion;

an outer sheath comprising an annealed metal cannula that is connected to the handle portion that at least partially houses the electrical conductor, wherein that portion of the outer sheath that extends distally from the handle portion comprises a shapeable portion, the shapeable portion having a distal end, the transducer head being affixed about the distal end of the shapeable portion; and

wherein the handle portion is slidable relative to the shapeable portion, such that the length of the shapeable portion can be adjusted by an operator of the medical probe.

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